

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 07-228567  
 (43)Date of publication of application : 29.08.1995

(51)Int.Cl. C07C323/24  
 C07C319/16  
 C07C323/37  
 C08G 59/66

(21)Application number : 06-316178 (71)Applicant : NIPPON SHOKUBAI CO LTD  
 (22)Date of filing : 20.12.1994 (72)Inventor : KAI TAKASHI  
 KIMURA KAZUMASA  
 KURATA NAOJI  
 MITSUI HITOSHI  
 UENO TSUNEMASA  
 TOMITA TAKASHI

## (30)Priority

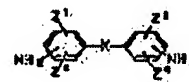
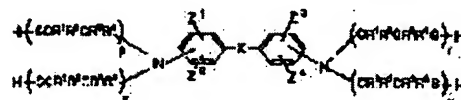
Priority number : 05321772 Priority date : 21.12.1993 Priority country : JP

## (54) SULFUR-CONTAINING COMPOUND AND ITS PRODUCTION

### (57)Abstract:

PURPOSE: To produce a new sulfur-containing compound having a highly reactive amino group and a highly reactive mercapto group in the molecule and useful, e.g. as a curing agent for epoxy resins, a polymer modifier, a cross-linking agent, a vulcanization agent and a monomer for polymerization.

CONSTITUTION: A compound of formula I [X is nothing or O, S, sulfinyl, sulfonyl, amide or a 1 to 4C alkylene; R1 to R4 each is H, an alkyl or an aromatic; (p), (q), (r) and (s) are each 0 to 10, etc.; Z1 to Z4 each is H, a 1 to 4C alkyl or a 1 to 4C alkoxy, a halogen, cyano, nitro or trifluoromethyl]. This compound is synthesized by reacting an amino compound of formula II with a thiirane compound (e.g. ethylene sulfide) of formula III in a solvent (e.g. benzene) at room temperature to 200°C. The compound of formula I is excellent in electrical insulation properties and heat resistance because of its aromatic rings existing in the molecule.



## LEGAL STATUS

[Date of request for examination]  
 [Date of sending the examiner's decision of rejection]  
 [Kind of final disposal of application other than the examiner's decision of rejection or application]

converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office